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The Royal Society of London

# PHILOSOPHICAL TRANSACTIONS

Volume 30  
1717-1719

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1963

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PHILOSOPHICAL  
TRANSACTIONS.

Giving Some

ACCOUNT

OF THE

*Present Undertakings, Studies and Labours*

OF THE

INGENIOUS,

In Many

Considerable Parts of the WORLD

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VOL. XXX. For the Years 1717. 1718. 1719.

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L O N D O N :

Printed for W. and J. INNYs, at the *Princes-Arms*,  
at the West Corner of St. Paul's Church - Yard.  
M DCC XX.

To the Right Honourable  
**T H O M A S**  
**Lord PARKER,**  
Baron of *Macclesfield*;  
**Lord High Chancellor**  
**Of Great-Britain :**

By INCLINATION as well as OFFICE,  
First PATRON of Useful Arts and  
Discoveries.

This THIRTIETH Volume  
OF THE  
**Philosophical Transactions**  
(As a *small* Acknowledgment for  
*very Great Favours*)

Is Humbly Inscrib'd by

*His Lordship's most obliged Servant,*  
**Edmund Halley, R. S. Secr.**

# PHILOSOPHICAL TRANSACTIONS.

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For the Months of *Januar. Febr. and March, 1717.*

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## The C O N T E N T S.

- I. *Observationes Stella fixæ in Geminis a corpore Jovis occultatæ, Januarii 11mo. St. vet. 1717. & Transitus ætiffimi Martis infra Borealem in fronte Scorpii Febr. Quinto mane.*
- II. *An accurate Account of a tessellated Pavement, Bath, and other Roman Antiquities, lately discover'd near East Bourne in Suffex. Being part of a Letter of January 26. 1717 from the learned Dr. John Tabor of Lewis, to Dr. John Thorpe, R. S. S. and by him communicated to the Royal Society.*
- III. *A short Account of the Nature and Vertues of the Fyrmont Waters; with some Observations upon their Chalybeat Quality. Communicated by Dr. Frederick Slare, R. S. Soc.*
- IV. *Remarks on the second Paper in the History of the Royal Academy of Sciences, for the Year 1711. concerning the Cause of the Variation of the Barometer: to shew that the Way of accounting for it in that Paper is insufficient, and that the Experiment made use of to prove what is there asserted, does no way prove it. By J. T. Desaguliers, M. A. F. R. S.*
- V. *An Account of an extraordinary Effect of the Cholick: communicated to the Royal Society, by that curious Anatomist Mr. St. Andre, and read March 21. 1717.*
- VI. *An Account of two late Northern Aurora's as they were observed at the Vicarage of Sutton at Hone in Kent. By the Reverend Edmund Barrell, Prebend of Rochester.*

# PHILOSOPHICAL TRANSACTIONS.

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- II. *Guilhelmi Musgrave Regie Societatis Socii, de Britannia quondam Pæne-Insula, DISSERTATIO.*
- III. *Extracts from Mr. Galcoigne's and Mr. Crabtree's Letters, proving Mr. Galcoigne to have been the Inventor of the Telescopick Sights of Mathematical Instruments, and not the French. By W. Derham, Prebend of Windsor, and R. Soc. Soc.*
- IV. *An Attempt towards the Improvement of the Method of approximating, in the Extraction of the Roots of Equations in Numbers. By Brook Taylor, Secretary to the Royal Society.*
- V. *Proprietates quædam simplicis Sectionum Conicarum ex natura Focorum deductæ; cum Theoremate generali de Viribus Centripetis; quorum ope Lex Virium Centripetarum ad Focos Sectionum tendentium, Velocitates Corporum in illis revolvantium, & Descriptio Orbium facillime determinantur. Per Abr. de Moivre. R. S. Soc.*



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- II. *Solutio Problematis à Dem. G. G. Leibnitio Geometris Anglis nuper propositi. Per Brook Taylor, LL. D. & R. S. Secr.*
- III. *Extract of a Letter of Dr. Chr. Hunter, M.D. to Dr. J. Woodward, M.D. & R. S. S. from Durham, giving an Account of a Roman Inscription, lately dug up in the North of England; with some Historical and Chronological Remarks thereon.*
- IV. *A new Genus of PLANTS, call'd Araliastrum, of which the famous Nin-zin or Ginseng of the Chineses, is a Species. Communicated by Mr. Vailant Prædemonstrator at the Royal Garden at Paris, to the Learned Dr. Will. Sherrard, LL. D. late Consul at Smyrna, and by him to the Royal Society.*
- V. *Extract of a Letter of Mr. Edw. Berkley from Naples, giving several curious Observations and Remarks on the Eruptions of Fire and Smoke from Mount VESUVIO. Communicated by Dr. John Arbuthnot, M. D. and R. S. S.*
- VI. *An Account of an extraordinary Tumour or Wen late'y cut off the Cheek of a Person in Scotland. Communicated to the Royal Society by Dr. Thomas Bower, M. D. and F. R. S.*
- VII. *An Account of an Experiment to prove an interspers'd Vacuum; or to shew that all Places are not equally full. By the Reverend J. Theoph. Desaguliers, M. A. and R. S. S.*

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- II. *An Account of some Experiments shown before the Royal Society ; with an Enquiry into the cause of the Ascent and Suspension of Water in Capillary Tubes.* By James Jurin, M. D. and R. Soc. S.
- III. *De Motu Aquarum fluentium. Authore eodem D. Jacobo Jurin, M. D.*
- IV. *An Account of the Sinking of three Oaks into the Ground, at Manington in the County of Norfolk. Communicated by Peter Le Neve, Esq; Norroy King at Arms, and Fellow of the Royal Society.*
- V. *A Rectification of the Motions of the five Satellites of Saturn ; with some accurate Observations of them, made and Communicated by the Reverend Mr. James Pound, R. S. Soc.*

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- II. *The rest of the Treatise of that Learned Antiquary Dr. John Tabor of Lewes (whereof the First Part is publish'd in N<sup>o</sup> 351. of these Transactions) concerning the Site of the ancient City of Anderida, and other Remains of Antiquity in the County of Suffex.*
- III. *Tractatus de Curvarum Constructione & Mensura; ubi plurimæ series Curvarum Infinitæ vel rectis mensurantur vel ad simpliciores Curvas reducuntur. Autore Colin Maclaurin, in Collegio novo Abredonensi Matheseos Professore.*
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- II. *A Discourse occasion'd by an Inscription found, about Three Tears ago, at Langchester in the Bishoprick of Durham, and communicated to the Royal Society from Dr. Hunter by Dr Woodward, as it is printed in the Philosophical Transactions, N<sup>o</sup> 345. By Roger Gale, Esquire, R. S. S.*
- III. *A Letter of that curious Naturalist Mr. Hen. Barham, R. S. S. to the Publisher, giving a Relation of a fiery Meteor seen by him, in Jamaica, to strike into the Earth; with Remarks on the Weather, Earthquakes, &c. of that Island.*
- IV. *An Attempt to prove the Antiquity of the Venereal Disease, long before the Discovery of the West-Indies; in a Letter from Mr. William Beckett, Surgeon, to Dr. James Dowglas, M. D. and R. Soc. Soc. and by him communicated to the Royal Society.*
- V. *Accuratarum Observationum Astronomicarum, anno superiore & currente cum Reg. Societate communicatarum, Sylloge.*

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- II. *De Potentiâ Cordis. Dissertatio Authore Jac. Jurin, M. D. Reg. Soc. Soc.*
- III. *A Brief Account of the Contagious Disease which raged among the Milch Cows near London, in the Year 1714. And of the Methods that were taken for suppressing it. Communicated to the Royal Society by Thomas Bates Esq; Surgeon to His Majesties Household, and R. S. S.*
- IV. *A Description of the Organ of Hearing in the Elephant, with the Figures and Situation of the Offices, Labyrinth and Cochlea in the Ear of that large Animal. Communicated to the Royal Society, by Dr. Patrick Blair, R. S. S.*

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- II. *A Discourse tending to shew the Situation of the ancient Carteia, and some other Roman Towns near it.* By John Conduitt, Esq; Fellow of the Royal Society.
- III. *A Letter of M. l'Abbé Conti, R. S. S. to the late M. Leibnitz, concerning the dispute about the Invention of the Method of Fluxions, or Differential Method; with M. Leibnitz his Answer thereto.*
- IV. *Pars reliqua Dissertationis De Potentiâ Cordis.* Authore Jacobo Jurin, M. D. & R. Societatis Soc.
- V. *Nova Methodus universalis Curvas Omnes cujuscunque Ordinis Mechanice describendi, sola datorum Angulorum & Rectarum ope.* Per D. Colin Maclaurin in Collegio Novo Abredonensi Matheseos Professore.
- VI. *Extract of a Letter of the Reverend Mr. William Rice, Rector of Caerleon upon Usk, to Charles Williams Esq; giving an account of an ancient Roman Inscription lately found there. With some Conjectures thereon, by the Reverend Dr. John Harris, R. S. S.*

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- I. **D**E Maximis & Minimis *quæ in motibus Corporum Cælestium occurrunt*
- II. *Apologia D. Brook Taylor, F. R. S. Soc. contra P. C. J. Bernoullium Math. Prof. Basilicæ.*
- III. *An Account of the Impression of the almost Entire Skeleton of a large Animal in a very hard Stone, lately presented the Royal Society, from Nottinghamshire. By Dr. William Stukely, M. D. and R. S. Soc.*
- IV. *A curious Description of the Strata observ'd in the Coal-Mines of Mendip in Somersetshire; being a Letter of John Strachey Esq; to Dr. Robert Welsted, M. D. and R. S. Soc. and communicated by him to the Society.*
- V. *Some Instances of the very great and speedy Vegetation of TURNIPS. Communicated by the Rev. Dr. J. Theoph. Desaguliers, R. S. S.*
- VI. *An Account of some Experiments tried with Mons. Villette's Burning Concave, in June 1718. By the Rev. Dr. J. Harris, and Dr. J. T. Desaguliers, Reg. Soc. SS.*
- VII. *An Account of the Extraordinary METEOR seen all over England, on the 19th of March 1718<sup>o</sup>. With a Demonstration of the uncommon Height thereof. By Edm. Halley, LL.D. and Secretary to the Royal Society.*



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- II. *D. Jacobi Keill, Medicinæ nuper Doctoris eruditissimi, De Viribus Cordis Epistola.*
- III. *An Account of some Experiments relating to the Specifick Gravity of Human Blood.* By James Jurin, M. D. Fellow of the College of Physicians, and F. R. S.
- IV. *An account of the Sunk Island in Humber, some Tears since recover'd from the Sea. Being an Extract of a Letter Communicated to the Royal Society by John Chamberlayne, Esq; R. S. S.*
- V. *A Way for Myopes to use Telescopes without Eye-Glasses, an Object-Glass alone becoming as useful to them, and sometimes more, than a Combination of Glasses. Communicated to the Royal Society, by the Reverend J. T. Desaguliers, LL. D. and F. R. S.*
- VI. *New and accurate Tables for the ready Computing of the Eclipses of the first Satellite of Jupiter by Addition only. By the Reverend Mr. James Pound, R. S. S.*

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- I. *A Letter of the curious Mr. Henry Barham, R. S. Soc. to Sir Hans Sloan, Bart. Vice-President of the Royal Society, giving several Experiments and Observations on the production of Silk-Worms and their Silk in England, as made by himself last Summer.*
- II. *Epistola D<sup>ni</sup>. Jacobi Jurin, M. D. & R. S. Socii, quæ doctrinam suam De Potentia Cordis, contra nuperas Objectiones Viri Clariss. D. Jacobi Keillii, M. D. in Num. 361. Philos. Transact. editas, defendit.*
- III. *Methodus Differentialis Newtoniana illustrata. Authore Jacobo Stirling, è Coll. Balliol. Oxon.*
- IV. *An Account of some Experiments made on the 27th Day of April, and on the 27th of July 1719. find how much the Resistance of the Air retards falling Bodies, by J. T. Desaguliers, L. L. D. and F. R. S.*

# PHILOSOPHICAL TRANSACTIONS.

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- I. *A Letter of Mr. Joseph Williamson Watchmaker, to the Publisher, wherein he asserts his right to the curious and useful Invention of making Clocks to keep Time with the Suns Apparent Motion.*
- II. *An Account of some new Experiments, relating to the Action of Glafs Tubes upon Water and Quicksilver. By James Jurin, M. D. Reg. Soc. & Coll. Med. Lond. Soc.*
- III. *Part of a Letter from Dr. Rich. Richardson, to Dr. Will. Sherard, R. S. S. giving a relation of a wonderful Fall of Water from a Spout, upon the Moors in Lancashire.*
- IV. *An Account of the Phænomena of a very extraordinary Aurora Borealis, seen at London on November 10. 1719. both Morning and Evening. By Dr. Edmond Halley. R. S. Secr.*
- V. *A Relation of the same Appearance, seen at Cruwys Morchard in Devonshire. Being part of a Letter to Sam. Cruwys, Esq; R. S. S. and by him Communicated to the Royal Society.*
- VI. *A further relation of the same Appearance as seen at Dublin, communicated to the Publisher by an unknown Hand.*
- VII. *An Account of another very considerable Aurora Borealis observed at Streatham in Surry, by Mr. Thomas Hearne; and Communicated by Coll. Francis Nicholson, R. S. S.*
- VIII. *Nupera Observationes Astronomicæ cum Regia Societate communicatæ.*